

CLAIMS

1. A semiconductor device comprising:

a semiconductor element;

5 a heat sink; and

an intermediate layer provided between the semiconductor element and the heat sink to moderate thermal stress.

2. A semiconductor device according to claim 1, wherein the intermediate layer

10 for moderating thermal stress comprises a carbon-copper composite material.

3. A semiconductor device comprising:

a semiconductor element;

a heat sink;

15 a laminar plate provided between the semiconductor element and the heat sink so as to include an intermediate layer for moderating thermal stress.

4. A semiconductor device according to claim 3, wherein the laminar plate comprises:

20 a first metal plate bonded to the semiconductor element;

the intermediate layer for moderating thermal stress, bonded to the opposite side of the first metal plate from the semiconductor element;

a second metal plate bonded to the opposite side of the intermediate layer from the side thereof bonded to the first metal plate;

25 an insulating member bonded to the opposite side of the second metal plate to the side thereof bonded to the intermediate layer; and

a third metal plate bonded to the opposite side of the insulating member

to the side thereof bonded to the second metal plate.

5. A semiconductor device according to claim 4, wherein the thickness of the second metal plate and the thickness of the third metal plate are equal.

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6. A semiconductor device according to claim 3, wherein the intermediate layer for moderating thermal stress comprises a carbon-copper composite material.